WEST Search History

DATE: Saturday, May 18, 2002

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR		
L10	L9 and l7	0	L10
L9	(PHMB or polyhexamethylenebiguanidine or polymeric adj biguanidines) same (deodor$ or odor or malodor or sanitiz$ or steriliz$ ordisinfect$ or biocide or antiseptic or antibiotic or antimicrobial)	89	L9
L8	L7 and (PHMB or polyhexamethylenebiguanidine or polymeric adj biguanidines)	0	L8
L7	L2 same (deodor$ or odor or malodor or sanitiz$ or steriliz$ ordisinfect$ or biocide or antiseptic or antibiotic or antimicrobial)	162	L7
L6	(PHMB or polyhexamethylenebiguanidine or polymeric adj biguanidines) same (biocide or antiseptic or antibiotic or antimicrobial)	76	L6
L5	l2 and (PHMB or polyhexamethylenebiguanidine or polymeric adj biguanidines)	0	L5
L4	L3 and (PHMB or polyhexamethylenebiguanidine or polymeric adj biguanidines)	0	L4
L3	L2 same (biocide or antiseptic or antibiotic or antimicrobial)	140	L3
L2	3-isothiazolone	511	L2
L1	isothiazolone	2298	L1

END OF SEARCH HISTORY

=> d his full

(FILE 'HOME' ENTERED AT 13:49:53 ON 18 MAY 2002)

FILE 'CAPLUS, MEDLINE, BIOSIS' ENTERED AT 13:50:14 ON 18 MAY 2002

L1 864 SEA ABB=ON PLU=ON ISOTHIAZOLONE

L2 139 SEA ABB=ON PLU=ON 3-ISOTHIAZOLONE AND (BIOCIDE OR ANTIMICROBIAL OR PRESERVATVIE OR ODOR? OR MALODOR OR DEODOR? OR STERILIZ? OR DISINFECT? OR SANITIZ?)

L3 93 SEA ABB=ON PLU=ON (PHMB OR POLYHEXAMETHYLENEBIGUANIDINE OR POLYMERIC 2A BIGUANIDINE) AND (BIOCIDE OR ANTIMICROBIAL OR PRESERVATVIE OR ODOR? OR MALODOR OR DEODOR? OR STERILIZ? OR DISINFECT? OR SANITIZ?)

L4 0 SEA ABB=ON PLU=ON L3 AND L1

L5 34 SEA ABB=ON PLU=ON (PHMB OR POLYHEXAMETHYLENEBIGUANIDINE OR POLYMERIC 2A BIGUANIDINE OR ISOTHIAZOLONE) (P) (COMBINATION OR MIXTUREOR SYNERG) AND (BIOCIDE OR ANTIMICROBIAL OR PRESERVATVIE OR ODOR? OR MALODOR OR DEODOR? OR STERILIZ? OR DISINFECT? OR SANITIZ?)

L6 75 SEA ABB=ON PLU=ON (PHMB OR POLYHEXAMETHYLENEBIGUANIDINE OR POLYMERIC 2A BIGUANIDINE) (P) (BIOCIDE OR ANTIMICROBIAL OR PRESERVATVIE OR ODOR? OR MALODOR OR DEODOR? OR STERILIZ? OR DISINFECT? OR SANITIZ?)

L7 55 SEA ABB=ON PLU=ON 3-ISOTHIAZOLONE (P) (BIOCIDE OR ANTIMICROBIAL OR PRESERVATVIE OR ODOR? OR MALODOR OR DEODOR? OR STERILIZ? OR DISINFECT? OR SANITIZ?)

FILE HOME

FILE CAPLUS

FILE COVERS 1907 - 18 May 2002 VOL 136 ISS 20
FILE LAST UPDATED: 15 May 2002 (20020515/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

FILE MEDLINE
FILE LAST UPDATED: 17 MAY 2002 (20020517/UP). FILE COVERS 1958 TO DATE.

On April 22, 2001, MEDLINE was reloaded. See HELP RLOAD for details.

MEDLINE now contains IN-PROCESS records. See HELP CONTENT for details.

MEDLINE is now updated 4 times per week. A new current-awareness alert frequency (EVERYUPDATE) is available. See HELP UPDATE for more informati

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2001 vocabulary. Enter HELP THESAURUS for details.

The OLDMEDLINE file segment now contains data from 1958 through 1965. Enter HELP CONTENT for details.

Left, right, and simultaneous left and right truncation are available in Basic Index. See HELP SFIELDS for details.

THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE SUBSTANCE IDENTIFICATION.

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 15 May 2002 (20020515/ED)

=> dup
ENTER REMOVE, IDENTIFY, ONLY, OR (?):rem
ENTER L# LIST OR (END):l5
PROCESSING COMPLETED FOR L5
L8 30 DUP REM L5 (4 DUPLICATES REMOVED)

=> d l8 ibib kwic 1-
YOU HAVE REQUESTED DATA FROM 30 ANSWERS - CONTINUE? Y/(N):y

L8 ANSWER 1 OF 30 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 1999:806577 CAPLUS
DOCUMENT NUMBER: 132:231546
TITLE: In vitro action of a combination of selected **antimicrobial** agents and chondroitin sulfate
AUTHOR(S): Muller, G.; Kramer, A.
CORPORATE SOURCE: Institute of Hygiene and Environmental Medicine, University of Greifswald, Greifswald, D-17487, Germany
SOURCE: Chemico-Biological Interactions (2000), 124(2), 77-85
CODEN: CBINA8; ISSN: 0009-2797
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI In vitro action of a combination of selected **antimicrobial** agents and chondroitin sulfate

AB Chondroitin sulfate (CS), a highly anionic polymer and the most predominant sulfated glycosaminoglycan in connective tissues, was investigated regarding to its interaction with cationic **disinfectants**, which are used as anti-infectives in humans. **Combinations** of cetylpyridiniumchloride (CPC), chlorhexidine (CHex), and polyhexamethylene biguanide (**PHMB**) with CS, resp., were prepd. and the resulting microbicidal activity of the mixts. was tested in the quant. suspension test without org. matter. Polyvidone-iodine and Ringer's soln. were used as controls. Even pptd., the resulting test **combinations** behave differently against Staphylococcus aureus, Enterococcus faecium, Escherichia coli, Pseudomonas aeruginosa, and Candida albicans. CPC/CS demonstrated only microbicidal activity against Gram-pos. bacteria, and CHex/CS was more active against Gram-neg. bacteria and C. albicans. **PHMB**/CS, esp. in **combination** with CS-A, only revealed an **antimicrobial** effect against P. aeruginosa after 60 min action. The interaction of cationic **disinfectants** with CS showed depending on the

investigated microorganism a more or less controlled sustained release manner of the microbicidal agent from the pptd. complex, with the only exception of **PHMB** in **combination** with CS-C, which is completely neutralized. Polyvidone-iodine and Ringer's soln. were not affected by CS.

ST **antimicrobial disinfectant** interaction chondroitin

IT **Disinfectants**
(cationic; in vitro interaction of selected **antimicrobial** agents with chondroitin sulfate)

IT **Antimicrobial** agents
Candida albicans
Enterococcus faecium
Escherichia coli
Pseudomonas aeruginosa
Staphylococcus aureus
(in vitro interaction of selected **antimicrobial** agents with chondroitin sulfate)

IT Quaternary ammonium compounds, biological studies
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(in vitro interaction of selected **antimicrobial** agents with chondroitin sulfate)

IT 55-56-1, Chlorhexidine 123-03-5, Cetylpyridiniumchloride
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(in vitro interaction of selected **antimicrobial** agents with chondroitin sulfate)

IT 9007-28-7, Chondroitin sulfate 24967-93-9, Chondroitin sulfate A 25322-46-7, Chondroitin sulfate C
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(in vitro interaction of selected **antimicrobial** agents with chondroitin sulfate)

L8 ANSWER 2 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:192048 CAPLUS
DOCUMENT NUMBER: 128:227310
TITLE: Enhanced wood preservative composition
INVENTOR(S): Schultz, Tor P.; Nicholas, Darrel D.
PATENT ASSIGNEE(S): Mississippi State University, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5730907	A	19980324	US 1996-708126	19960827
US 5944880	A	19990831	US 1998-13785	19980126

PRIORITY APPLN. INFO.: US 1996-708126 19960827
OTHER SOURCE(S): MARPAT 128:227310

AB A wood preservative compn. comprising a **biocide**, such as a quaternary ammonium compd., e.g., didecyldimethylammonium chloride, an **isothiazolone** or an isophthalonitrile, in **combination** with an antioxidant, which is a flavone or a phenol, is useful as a cost-effective and environmentally-safe wood preservative.

L8 ANSWER 3 OF 30 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:108893 BIOSIS

DOCUMENT NUMBER: PREV200200108893
TITLE: Synergistic microbicidal **combinations** containing 4,5-dichloro-2-octyl-3-**isothiazolone** and certain commercial **biocides**.
AUTHOR(S): Hsu, J. C.
CORPORATE SOURCE: Fort Washington, Pa. USA
ASSIGNEE: ROHM AND HAAS COMPANY
PATENT INFORMATION: US 5759786 June 2, 1998
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (June 2, 1998) Vol. 1211, No. 1, pp. 461-462.
ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
TI Synergistic microbicidal **combinations** containing 4,5-dichloro-2-octyl-3-**isothiazolone** and certain commercial **biocides**.
IT Miscellaneous Descriptors
BIOCIDE; BIOTECHNOLOGY; COMPOSITION; **DISINFECTANT**; INGREDIENT

L8 ANSWER 4 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:730050 CAPLUS
DOCUMENT NUMBER: 130:91584
TITLE: Control of biofilms with cooling water **biocides**
AUTHOR(S): Ludensky, M. L.; Himpler, F. J.; Sweeny, P. G.
CORPORATE SOURCE: Lonza, Inc., Annandale, NJ, 08801, USA
SOURCE: Materials Performance (1998), 37(10), 50-55
CODEN: MTPFBI; ISSN: 0094-1492
PUBLISHER: NACE International
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
TI Control of biofilms with cooling water **biocides**
AB The biocidal efficacy of oxidizing (halohydantoin) and nonoxidizing (**isothiazolones**) **biocide combinations** against filamentous biofilms was compared to the efficacy of these **biocides** alone under well-defined lab. conditions. Synergistic efficacy of halohydantoins and **isothiazolones** was shown. The halohydantoin/**isothiazolones combination** programs provided optimized cost performance with respect to biofilm control. The simultaneous addn. of oxidizing and nonoxidizing **biocides** is the preferable mode of **biocide** treatment.
ST biofilm cooling water **biocide**
IT **Biocides**
Cooling water
(control of biofilms with cooling water **biocides**)
IT 55965-84-9, Isocil RW 89415-46-3, Dantobrom RW 219553-43-2
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(control of biofilms with cooling water **biocides**)

L8 ANSWER 5 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:461932 CAPLUS
DOCUMENT NUMBER: 129:179896
TITLE: Field performance of a new **biocide** for biofouling control in water treatment applications
AUTHOR(S): Gaffney, Tammy W.; Wiatr, Christopher L.
CORPORATE SOURCE: Calgon Corp., Pittsburgh, PA, 15205, USA
SOURCE: Materials Performance (1998), 37(7), 50-55
CODEN: MTPFBI; ISSN: 0094-1492

PUBLISHER: NACE International
DOCUMENT TYPE: Journal
LANGUAGE: English
TI Field performance of a new **biocide** for biofouling control in water treatment applications
AB The performance of a water treatment **isothiazolone**-based **biocide** was evaluated through a field trial performed on 2 recirculating cooling towers at an eastern US steel mill. The **biocide** was tested alone on one tower and in **combination** with an oxidizing **biocide** (Cl) on the other tower. The **biocide** was slug-fed into each system 2 times/wk for time periods of 9 and 5 wk. Low use rates of the **isothiazolone** **biocide** were effective in preventing accumulation of a range of green algae and cyanobacteria on both cooling tower decks. Only when the **biocide** treatment was discontinued did an algal biomat form on both decks. In **combination** with Cl (fed daily), the **biocide** maintained the aerobic bacterial plate counts measured from the cooling tower water at low levels throughout the trial. Performance of this **biocide** was compared with that of terbuthylazine in lab. recirculating cooling tower studies.
ST **biocide** biofouling water treatment
IT Antifouling agents
Antifouling agents
(antibiofouling; field performance of **biocide** for biofouling control in water treatment)
IT Water purification
(biofouling control; field performance of **biocide** for biofouling control in water treatment)
IT **Biocides**
Cooling towers
Cyanobacteria
Green algae (Chlorophyta)
(field performance of **biocide** for biofouling control in water treatment)
IT 5915-41-3, 2-(tert-Butylamino)-4-chloro-6-(ethylamino)-s-triazine
RL: NUU (Other use, unclassified); USES (Uses)
(**biocide**; field performance of **biocide** for biofouling control in water treatment)
IT 7681-52-9, Sodium hypochlorite 64359-81-5
RL: NUU (Other use, unclassified); USES (Uses)
(field performance of **biocide** for biofouling control in water treatment)

L8 ANSWER 6 OF 30 MEDLINE
ACCESSION NUMBER: 1998097374 MEDLINE
DOCUMENT NUMBER: 98097374 PubMed ID: 9436874
TITLE: Treatment of Acanthamoeba keratitis.
COMMENT: Comment in: Cornea. 1998 Jan;17(1):1-2
AUTHOR: Lindquist T D
CORPORATE SOURCE: Cornea and External Disease Service, Virginia Mason Medical Center, Seattle, Washington 98111-0900, USA.
SOURCE: CORNEA, (1998 Jan) 17 (1) 11-6. Ref: 79
Journal code: DSN; 8216186. ISSN: 0277-3740.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199802
ENTRY DATE: Entered STN: 19980306
Last Updated on STN: 19980306
Entered Medline: 19980223

AB . . . diagnosis of Acanthamoeba keratitis plays a crucial role in successful medical treatment. The cationic antiseptic agents, chlorhexidine and polyhexamethylene biguanide (**PHMB**) have the lowest minimal amoebicidal concentrations. Synergistic effects are seen when used with pentamidine, and additive effects are seen with. . . are important elements in the successful treatment of Acanthamoeba keratitis. Recommended therapy would include the cationic antiseptic agents, chlorhexidine or **PHMB** in **combination** with propamidine isethionate and neomycin as part of triple therapy. Surgical intervention should be avoided until a medical cure has. . .

CT . . .

AD, administration & dosage
*Antiprotozoal Agents: TU, therapeutic use
Cornea: DE, drug effects
Cornea: PA, pathology
Cornea: SU, surgery
*Cryosurgery
Disinfectants: AD, administration & dosage
***Disinfectants: TU, therapeutic use**
Drug Therapy, Combination
*Keratoplasty, Penetrating
Ophthalmic Solutions

CN 0 (Antiprotozoal Agents); 0 (**Disinfectants**); 0 (Ophthalmic Solutions)

L8 ANSWER 7 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:15627 CAPLUS
DOCUMENT NUMBER: 128:106200
TITLE: Method for use of compositions of **biocides** and fluorescent indicators to control microbial growth
INVENTOR(S): McCoy, William F.; Hoots, John E.
PATENT ASSIGNEE(S): Nalco Chemical Co., USA
SOURCE: U.S., 14 pp. Cont.-in-part of U.S. Ser. No. 236,945, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5702684	A	19971230	US 1995-557882	19951114
CN 1113104	A	19951213	CN 1994-113481	19941215
CN 1069162	B	20010808		
JP 08053301	A2	19960227	JP 1995-108747	19950502

PRIORITY APPLN. INFO.: US 1994-236945 B2 19940502

TI Method for use of compositions of **biocides** and fluorescent indicators to control microbial growth

AB A concn. of microbiocides added to fluid systems is monitored by a fluorescence emission method which is based upon the measurement of the fluorescence intensity of an inert fluorescent additive which is added to the microbiocide compn. prior to its introduction into the fluid system. Optionally, the fluorescent additive may be metered sep. into the fluid system in direct proportion to the amt. of industrial microbiocide added. **Biocide** compns. contg. inert fluorescent additives are also disclosed. Preferably the fluid system is an industrial aq. system. Preferred **combinations** of **biocide** and fluorescent additive are glutaraldehyde/1,5-naphthalene disulfonic acid, glutaraldehyde/1,3,6,8-pyrene tetrasulfonic acid, **isothiazolone** /1,5-naphthalene disulfonic acid, **isothiazolone**/1,3,6,8-pyrene tetrasulfonic acid, glutaraldehyde/fluorescein, alkyl-dimethylbenzyl ammonium chloride quaternary/2-naphthalene sulfonic acid and

2-(decylthio)-ethanamine/2-naphthalene sulfonic acid.
ST **biocide** fluorescent indicator water biofouling control
IT **Biocides**
Dreissena polymorpha
Water biofouling control
Water **disinfection**
(method for use of compns. of **biocides** and fluorescent indicators to control microbial growth)
IT 111-30-8, Glutaraldehyde 1875-92-9D, Dimethyl benzyl ammonium chloride, alkyl derivs. 2682-20-4, 2-Methyl-4-isothiazolin-3-one 7647-15-6, Sodium bromide, biological studies 7722-84-1, Hydrogen peroxide, biological studies 10402-29-6, Copper nitrate 26172-55-4, 5-Chloro-2-methyl-4-isothiazolin-3-one 29873-30-1, 2-(Decylthio)-ethanamine 55965-84-9, Kathon 886F
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(method for use of compns. of **biocides** and fluorescent indicators to control microbial growth)
IT 81-04-9, 1,5-Naphthalene disulfonic acid 120-18-3, 2-Naphthalene sulfonic acid 532-02-5, 2-Naphthalenesulfonic acid sodium salt 2321-07-5, Fluorescein 6528-53-6, 1,3,6,8-Pyrene tetrasulfonic acid 37299-86-8, Rhodamine WT
RL: MOA (Modifier or additive use); USES (Uses)
(method for use of compns. of **biocides** and fluorescent indicators to control microbial growth)

L8 ANSWER 8 OF 30 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:60261 BIOSIS
DOCUMENT NUMBER: PREV200200060261
TITLE: Synergistic microbicidal **combinations** containing 4,5-dichloro-2-octyl-3-**isothiazolone** and certain commercial **biocides**.
AUTHOR(S): Hsu, J. C.
CORPORATE SOURCE: Fort Washington, Pa. USA
ASSIGNEE: ROHM AND HAAS COMPANY
PATENT INFORMATION: US 5591760 Jan. 7, 1997
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Jan. 7, 1997) Vol. 1194, No. 1, pp. 452. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
TI Synergistic microbicidal **combinations** containing 4,5-dichloro-2-octyl-3-**isothiazolone** and certain commercial **biocides**.
IT Miscellaneous Descriptors
ANTIBIOTICS; **BIOCIDES**; PHARMACEUTICALS; SYNERGISTIC MICROBIOCIDE; 3-IODO-2-PROPYNYLBUTYLCARBAMATE; 4,5-DICHLORO-2-OCTYL-3-ISOTHIAZOLONE

L8 ANSWER 9 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:377817 CAPLUS
DOCUMENT NUMBER: 129:97465
TITLE: **Biocides** as additives for metalworking formulations
AUTHOR(S): Balulescu, M.
CORPORATE SOURCE: ICERP S.A. Lubricants and Additives, Rom.
SOURCE: Additives in Petroleum Refinery and Petroleum Product Formulation Practice, Proceedings, Sopron, Hung., May 21-23, 1997 (1997), 172-175. Editor(s): Kovacs, Andras. Hungarian Chemical Society: Budapest, Hung. CODEN: 66FKA3
DOCUMENT TYPE: Conference
LANGUAGE: English

TI **Biocides** as additives for metalworking formulations

AB Metalworking formulations (MWF) are complex mixts. of components, many of them being easily degraded by microorganisms. There are many problems assocd. with microbial growth in emulsions: corrosion, emulsion instability, health and environment risks, high maintenance costs. In order to solve these problems, **biocides** can be applied in two ways: as additives in the conc. MWF or as tank side addn. Both possibilities have pro and cons. We present some of our lab. and field trial results of testing these two ways. We tested in the lab. the new fluid A, a semi-synthetic emulsifiable oil for grinding, along with **biocides** in conc. and with **biocide** added periodically in the emulsion. The **biocides** were: **isothiazolone** (BI) and triazine (BT) type. The first test carried out was oximetry, when we estd. the difference between biodegradability of MWF A and the two formulations with **biocides** BI and BT. The oxygen uptake for A + BI and A + BT were much lower than for MWF alone. The next test we performed in the lab. was a challenge test, where every type of fluid was periodically inoculated with mixt. of inoculum and **biocide** for one month. The fluid A was degraded after first week; the **combination** A + BT had a medium resistance to microbial attack and it was necessary to add **biocide** BI in the emulsion. The **combination** A + BI had a very good behavior during the test. The next step was a field trial with fluid A + BT and **biocide** BI added every 2 or 3 wk. The expt. was performed in a workshop with central emulsion system. After 6 mo the A + BT fluid with **biocide** BI as tank side treatment, proved to have good resistance to microbial attack. We consider that **biocide** added in the conc. is more appropriate for MWF used in individual machines, where tank side addn. can be difficult. For large systems the most obvious problem is the top-up rate with MWF conc. that can not be controlled as strictly to ensure a const. concn. of **biocide** in emulsion. Every metalworking process has its specific conditions so that the decision between **biocide** in conc. or in a treatment program has to be taken on the spot.

ST **biocide** isothiazolone triazine metalworking fluid

IT Lubricating oil additives
Lubricating oil additives
(metalworking oil additives; **biocides** as additives for metalworking formulations)

IT 1003-07-2, 3(2H)-Isothiazolone 12654-97-6, Triazine
RL: MOA (Modifier or additive use); USES (Uses)
(**biocides** as additives for metalworking formulations)

L8 ANSWER 10 OF 30 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:34826 BIOSIS
DOCUMENT NUMBER: PREV200200034826
TITLE: Synergistic microbicidal **combinations** containing 2-methyl-3-**isothiazolone** and certain commercial **biocides**.
AUTHOR(S): Hsu, J. C.
CORPORATE SOURCE: Fort Washington, Pa. USA
ASSIGNEE: ROHM AND HAAS COMPANY
PATENT INFORMATION: US 5489588 Feb. 6, 1996
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Feb. 6, 1996) Vol. 1183, No. 1, pp. 279. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English

TI Synergistic microbicidal **combinations** containing 2-methyl-3-**isothiazolone** and certain commercial **biocides**.

L8 ANSWER 11 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:733496 CAPLUS
DOCUMENT NUMBER: 123:135888

TITLE: Solid 3-isothiazolone derivative biocidal concentrates.
INVENTOR(S): Mattox, John R.
PATENT ASSIGNEE(S): Rohm and Haas Co., USA
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5430046	A	19950704	US 1994-209799	19940311
CA 2142151	AA	19950912	CA 1995-2142151	19950209
EP 671124	A1	19950913	EP 1995-301385	19950303
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
JP 07285814	A2	19951031	JP 1995-77145	19950309
ZA 9502010	A	19951211	ZA 1995-2010	19950310
CN 1111089	A	19951108	CN 1995-102698	19950311
JP 08268810	A2	19961015	JP 1995-93154	19950327

PRIORITY APPLN. INFO.: US 1994-209799 19940311
OTHER SOURCE(S): MARPAT 123:135888
AB Title compns. are given, solid at 20.degree.., easily meltable and solidifiable, and capable of undergoing remelt and resolidification without loss of homogeneity and method. The compns. comprise a microbicidal 3-**isothiazolone** and a m.p. depressant with sp. gr. 1.14-1.24, such as **combinations** of methylnaphthalene with propylene carbonate or with methylene chloride.
ST isothiazolone deriv **biocide** solid conc

L8 ANSWER 12 OF 30 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:32078 BIOSIS
DOCUMENT NUMBER: PREV200200032078
TITLE: Synergistic microbicidal **combinations** containing 4,5-dichloro-2-octyl-3-**isothiazolone** and certain commercial **biocides**.
AUTHOR(S): Hsu, J. C.
CORPORATE SOURCE: Fort Washington, Pa. USA
ASSIGNEE: ROHM AND HAAS COMPANY
PATENT INFORMATION: US 5468759 Nov. 21, 1995
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 21, 1995) Vol. 1180, No. 3, pp. 1796. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
TI Synergistic microbicidal **combinations** containing 4,5-dichloro-2-octyl-3-**isothiazolone** and certain commercial **biocides**.

L8 ANSWER 13 OF 30 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:31696 BIOSIS
DOCUMENT NUMBER: PREV200200031696
TITLE: Synergistic microbicidal **combinations** containing 4,5-dichloro-2-N-ocytl-3-**isothiazolone** and certain commercial **biocides**.
AUTHOR(S): Downey, A. B.; Frazier, V. S.; Willingham, G. L.
CORPORATE SOURCE: Lansdale, Pa. USA
ASSIGNEE: ROHM AND HAAS COMPANY
PATENT INFORMATION: US 5466382 Nov. 14, 1995
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Nov. 14, 1995) Vol. 1180, No. 2, pp. 957. ISSN: 0098-1133.

DOCUMENT TYPE: Patent
LANGUAGE: English
TI Synergistic microbicidal **combinations** containing 4,5-dichloro-2-N-ocytl-3-**isothiazolone** and certain commercial **biocides**.
IT Miscellaneous Descriptors
DISINFECTANT; MICROBICIDE

L8 ANSWER 14 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:585913 CAPLUS
DOCUMENT NUMBER: 125:230134
TITLE: Synergism in cosmetic preservation
AUTHOR(S): Merianos, J. J.
CORPORATE SOURCE: Germany
SOURCE: Preservatech Conf. Proc. (1995), 51-62. Verlag fuer Chemische Industrie H. Ziolkowsky: Augsburg, Germany. CODEN: 63JNAB
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English
AB A review with 13 refs. The use of **antimicrobial combinations**, methylols/parabens, **isothiazolones** and their mode of action in cosmetic preservation are discussed.

L8 ANSWER 15 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:263844 CAPLUS
DOCUMENT NUMBER: 120:263844
TITLE: Synergistic microbicidal composition comprising 3-isothiazolones and 1-methyl-3,5,7-triaza-1-azoniatricyclo(3.3.1.1)decane chloride
INVENTOR(S): Hsu, Jemin C.
PATENT ASSIGNEE(S): Rohm and Haas Co., USA
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5294614	A	19940315	US 1993-3712	19930113
CA 2110849	AA	19940714	CA 1993-2110849	19931207
JP 07002603	A2	19950106	JP 1993-347043	19931227
BR 9305267	A	19940802	BR 1993-5267	19931228
AU 9352764	A1	19940721	AU 1993-52764	19931230
AU 670836	B2	19960801		
EP 606985	A1	19940720	EP 1994-300101	19940107

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE
PRIORITY APPLN. INFO.: US 1993-3712 19930113
AB The title synergistic **combinations** are industrial microbicides useful for preventing growth of bacteria and fungi in coatings, cutting fluids, pulp and paper mills, cooling towers, textiles, wood, water supply systems, oil field drilling fluids, etc. Thus, a **combination** of 2-methyl-3-**isothiazolone** 0.5 and 1-methyl-3,5,7-triaza-1-azoniatricyclo(3.3.1.1)decane chloride 1125 ppm showed a synergy index of 0.24 against Rhodotorula rubra.
IT Bactericides, **Disinfectants**, and Antiseptics
Fungicides and Fungistats
(industrial, synergistic, isothiazolone mixts. with methyltriazaazoniatricyclodecane chloride)

L8 ANSWER 16 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:210793 CAPLUS

DOCUMENT NUMBER: 120:210793
TITLE: Synergistic microbides useful in many industries
INVENTOR(S): Sano, Yoichi; Tanaka, Juko
PATENT ASSIGNEE(S): Katayama Chemical Works Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05320004	A2	19931203	JP 1992-127748	19920520
JP 3081061	B2	20000828		

AB A synergistic microbicide contains N-bromoacetamide in **combination** with .gtoreq. 1 compd. selected from the group comprising alkylenebis(thiocyanate), 3-**isothiazolone** derivs., 3-**isothiazolone** derivs., 3-**isothiazolone** derives.-metal salt complexes, thiadiazine derivs., org. bromonitro compds., org. bromocyano compds., org. bromoacetic acid esters, org. bromosulfone derivs., s-triazine compds., halogenated oxime compds., amino alcs., and glutardialdehyde. Fourteen specific mixts. are claimed. The microbides are useful in industries manufg. paper and paint or in various oils.

IT Bactericides, **Disinfectants**, and Antiseptics
Fungicides and Fungistats
(synergistic, contg. bromoacetamide, industrial)

L8 ANSWER 17 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:465652 CAPLUS
DOCUMENT NUMBER: 119:65652
TITLE: Synergistic **combinations** of 2-methyl-3-**isothiazolone** and certain commercial **biocides**.
INVENTOR(S): Hsu, Jemin Charles
PATENT ASSIGNEE(S): Rohm and Haas Co., USA
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 544418	A2	19930602	EP 1992-310095	19921104
EP 544418	A3	19930714		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
EP 645086	A1	19950329	EP 1994-119006	19921104
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
IL 103668	A1	19960618	IL 1992-103668	19921106
CA 2083367	AA	19930527	CA 1992-2083367	19921119
HU 63566	A2	19930928	HU 1992-3703	19921125
JP 05246808	A2	19930924	JP 1992-337776	19921126
US 5489588	A	19960206	US 1995-405573	19950316
PRIORITY APPLN. INFO.:			US 1991-798398	19911126
			US 1992-975260	19920904
			EP 1992-310095	19921104

TI Synergistic **combinations** of 2-methyl-3-**isothiazolone** and certain commercial **biocides**.

IT Bactericides, **Disinfectants**, and Antiseptics
Fungicides and Fungistats
(synergistic, methylisothiazolone-contg. compns.)

L8 ANSWER 18 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:237441 CAPLUS
DOCUMENT NUMBER: 118:237441
TITLE: Stabilized metal salt/3-**isothiazolone combinations**
INVENTOR(S): Law, Andrew B.; Willingham, Gary L.
PATENT ASSIGNEE(S): Rohm and Haas Co., USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5160527	A	19921103	US 1991-708004	19910524

TI Stabilized metal salt/3-**isothiazolone combinations**
IT Bactericides, **Disinfectants**, and Antiseptics
(isothiazolone compds., for metalworking fluids and cooling waters)

L8 ANSWER 19 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1992:485233 CAPLUS
DOCUMENT NUMBER: 117:85233
TITLE: Synergistic **antimicrobial combinations** of 4,5-dichloro-2-n-octyl-3-**isothiazolone** or 2-methyl-3-**isothiazolone** with ferric dimethyl dithiocarbamate
INVENTOR(S): Sherba, Samuel E.; Mehta, Raj J.; Lange, Barry C.
PATENT ASSIGNEE(S): Rohm and Haas Co., USA
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5110822	A	19920505	US 1991-637086	19910103
JP 05058815	A2	19930309	JP 1991-358029	19911227

PRIORITY APPLN. INFO.: US 1991-637086 19910103
TI Synergistic **antimicrobial combinations** of 4,5-dichloro-2-n-octyl-3-**isothiazolone** or 2-methyl-3-**isothiazolone** with ferric dimethyl dithiocarbamate
IT Bactericides, **Disinfectants**, and Antiseptics
Fungicides and Fungistats
(industrial, synergistic, isothiazolone deriv.- and ferric dimethyldithiocarbamate-contg. compns.)

L8 ANSWER 20 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:80942 CAPLUS
DOCUMENT NUMBER: 118:80942
TITLE: Method for stabilization of isothiazolone derivatives using triazoles or benzotriazoles and nitro alcohols
INVENTOR(S): Fukuda, Takeshi; Uejima, Takuo; Watanabe, Michio
PATENT ASSIGNEE(S): Permachem Asia, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04182474	A2	19920630	JP 1990-310179	19901117
JP 2967525	B2	19991025		

AB A soln. of **isothiazolones** (I; X = H, halo; Y = lower alkyl) is stabilized by adding .gtoreq.1 triazoles and .gtoreq.1 nitro alcs., preferably selected from 1,2,4-triazoles (II; R1 = H, alkyl, Ph; R2, R3 = H, alkyl, Ph, oxo), benzotriazoles (III; R4 = H, alkyl, Ph, halo, NO2), and nitro alcs. R5O(CH2)nCR6R7NO2 [n = 1-3; R5 = H, Ac; R6 = H, Br, Cl, R7O(CH2)n; R7 = H, Br, Cl]. I are used as slimicides in paper processing or **disinfectants** for polymer emulsions. The **combination** of a triazole and a nitro alc. shows synergistic effect on the stabilization of I. Thus, Zonen F contg. .apprx.14% 5-chloro-2-methylisothiazolin-3-one (IV) and 2-methylisothiazolin-3-one (V) (Ichikawa Gosei Kagaku Inc.) 50, H2O 46, 2-bromo-2-nitropropan-1,3-diol 1, and 1,2,4-triazole 3 parts were stirred to form a soln. which was stored at 50.degree. for 30 days to show residual ratio 96.2% IV and 90.5% V, vs. 0% for an aq. soln. without IV and V.

IT Bactericides, **Disinfectants**, and Antiseptics
(isothiazolone soln. contg. triazoles benzotriazoles and nitro alcs., for polymer emulsions)

L8 ANSWER 21 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1992:17175 CAPLUS
DOCUMENT NUMBER: 116:17175
TITLE: Synergistic microbicidal **combinations** containing 4,5-dichloro-2-octyl-3-**isothiazolone** and certain commercial **biocides**
INVENTOR(S): Hsu, Jemin C.
PATENT ASSIGNEE(S): USA
SOURCE: Can. Pat. Appl., 30 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2028223	AA	19910503	CA 1990-2028223	19901022
ZA 9008425	A	19910731	ZA 1990-8425	19901022
AU 9065607	A1	19910509	AU 1990-65607	19901030
AU 644610	B2	19931216		
BR 9005562	A	19910917	BR 1990-5562	19901101
IL 96205	A1	19950315	IL 1990-96205	19901101
HU 55196	A2	19910528	HU 1990-7001	19901102
HU 205837	B	19920728		
EP 431752	A2	19910612	EP 1990-312064	19901102
EP 431752	A3	19910925		
EP 431752	B1	19940914		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 03184904	A2	19910812	JP 1990-298735	19901102
EP 608911	A1	19940803	EP 1994-103388	19901102
EP 608911	B1	19990331		
EP 608911	B2	20020130		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
EP 608912	A1	19940803	EP 1994-103389	19901102
EP 608912	B1	19980617		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				

EP 608913	A1	19940803	EP 1994-103391	19901102
EP 608913	B1	19990303		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
EP 608914	A1	19940803	EP 1994-103392	19901102
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
EP 611522	A1	19940824	EP 1994-103390	19901102
EP 611522	B1	19970108		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
ES 2060064	T3	19941116	ES 1990-312064	19901102
PL 166522	B1	19950531	PL 1990-287620	19901102
CZ 281398	B6	19960911	CZ 1990-5409	19901102
AT 147229	E	19970115	AT 1994-103390	19901102
AT 167357	E	19980715	AT 1994-103389	19901102
AT 176990	E	19990315	AT 1994-103391	19901102
AT 178190	E	19990415	AT 1994-103388	19901102
US 5292763	A	19940308	US 1991-810602	19911219
US 5468759	A	19951121	US 1993-131849	19931118
US 5591760	A	19970107	US 1995-410165	19950324
US 5759786	A	19980602	US 1996-692159	19960805

PRIORITY APPLN. INFO.:	US 1989-431367	A	19891103
	US 1990-591316	B3	19901001
	EP 1990-312064	A3	19901102
	US 1991-810602	A3	19911219
	US 1993-131849	A3	19931118
	US 1995-410165	A3	19950324

TI Synergistic microbicidal **combinations** containing 4,5-dichloro-2-octyl-3-**isothiazolone** and certain commercial **biocides**

IT Bactericides, **Disinfectants**, and Antiseptics
Fungicides and Fungistats
(industrial, synergistic, dichlorooctylisothiazolone-contg. compns.)

L8 ANSWER 22 OF 30 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER:	1992:552795 CAPLUS
DOCUMENT NUMBER:	117:152795
TITLE:	Studies on **biocide** release and performance of novel antifungal paints
AUTHOR(S):	Heaton, Pamela E.; Butler, Gillian M.; Milne, A.; Callow, Maureen E.
CORPORATE SOURCE:	Sch. Biol. Sci., Univ. Birmingham, Edgbaston/Birmingham, B15 2TT, UK
SOURCE:	Biofouling (1991), 3(1), 35-43 CODEN: BFOUEC; ISSN: 0892-7014
DOCUMENT TYPE:	Journal
LANGUAGE:	English

TI Studies on **biocide** release and performance of novel antifungal paints

AB The controlled release of an **isothiazolone** fungicide, C9211 (4,5-dichloro-2-(n-octyl)-3(2H)-**isothiazolone**) from a urethane oil paint is described. The amt. of C9211 in the leachates was proportional to the loading in the paint. Paints contg. 8% C9211 in the undercoat but none in the topcoat released C9211 in the same amts. as paints contg. 4% C9211 in both undercoat and topcoat and the field performance of both paint **combinations** were identical. These results indicate that the C9211 is able to migrate through the urethane oil matrix replenishing any lost from the surface and thus giving effective antifungal control as long as **biocide** remains in the bulk of the paint.

L8 ANSWER 23 OF 30 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2

ACCESSION NUMBER:	1991:160559 CAPLUS
DOCUMENT NUMBER:	114:160559
TITLE:	Synergism within polyhexamethylene biguanide

biocide formulations
AUTHOR(S): Gilbert, P.; Pemberton, D.; Wilkinson, Diane E.
CORPORATE SOURCE: Dep. Pharm., Univ. Manchester, Manchester, M13 9PL, UK
SOURCE: J. Appl. Bacteriol. (1990), 69(4), 593-8
CODEN: JABAA4; ISSN: 0021-8847
DOCUMENT TYPE: Journal
LANGUAGE: English
TI Synergism within polyhexamethylene biguanide **biocide** formulations
AB Polyhexamethylene biguanides (**PHMB**) are mixts. of polymeric biguanides with an av. polymer length (n) of 5, but contg. high (n >15, mol. wt. 3300) and low mol. wt. material (n = 2, mol. wt. 400). Studies involving discrete mol. wt. fractions of **PHMB** have shown that **antimicrobial** activity of **PHMB** increases with increasing polymer length. Cell suspensions which had not been subjected to centrifugation and/or washing during their prepn. were employed. While activity was still obsd. to increase with n, the trend was much reduced as n exceeded six. Centrifugation and washing of cells markedly increased the activity of high but not low mol. wt. materials and corresponded to losses upon centrifugation of envelope lipopolysaccharide (LPS). Such envelope LPS represented high affinity binding sites on the surfaces of the cells. **Combinations** of various mol. wt. fractions of **PHMB** were evaluated against filter-washed cells and revealed a profound synergy between extremes of polymer length.
IT Bactericides, **Disinfectants**, and Antiseptics
(polyhexamethylene biguanide formulation as)

L8 ANSWER 24 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:491899 CAPLUS
DOCUMENT NUMBER: 107:91899
TITLE: Microbicides containing isothiazolone derivatives, 2,2-dibromo-3-nitrilopropionamide and/or hexachlorodimethylsulfone
INVENTOR(S): Okamoto, Kiyoshi
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62070301	A2	19870331	JP 1985-211844	19850924

AB Industrial synergistic microbicides consist of 3-**isothiazolones** (I; R1 = H or halo; R2 = H or C1-18 alkyl) or their metallic salt complexes in **combination** with 2,2-dibromo-3-nitrilopropionamide and/or hexachlorodimethylsulfone. A microbicide was prepd. consisting of 5-chloro-2-methyl-4-isothiazolin-3-one 3.0, 2-methyl-4-isothiazolin-3-one 1.0, 2,2-dibromo-3-nitrilopropionamide 6.0, MgCl2 2.5, Mg(NO3)2 4.0, diethylene glycol 66.5, and H2O 17.0% by wt.
IT Bactericides, **Disinfectants**, and Antiseptics
Fungicides and Fungistats
(synergistic, isothiazolone-contg.)

L8 ANSWER 25 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:454214 CAPLUS
DOCUMENT NUMBER: 107:54214
TITLE: Industrial bactericides and algicides containing aliphatic nitroalcohols and isothiazolones
INVENTOR(S): Umekawa, Osamu; Ito, Yosuke; Katayama, Sakae
PATENT ASSIGNEE(S): Katayama Chemical Works Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62010003	A2	19870119	JP 1985-148670	19850705
JP 05063445	B4	19930910		

IT Algicides
(aliph. nitroalc. deriv. and **isothiazolone** complex **combinations**)
IT Bactericides, **Disinfectants**, and Antiseptics
(synergistic, aliph. nitroalc. deriv. and **isothiazolone** complex **combinations**)

L8 ANSWER 26 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1988:427641 CAPLUS
DOCUMENT NUMBER: 109:27641
TITLE: Synergistic bactericidal compositions containing hydroxymethylaminoacetate and isothiazolones
INVENTOR(S): Berke, Philip A.; Rosen, William E.
PATENT ASSIGNEE(S): Sutton Laboratories, Inc., USA
SOURCE: Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 236119	A1	19870909	EP 1987-301835	19870303
EP 236119	B1	19900919		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
FI 8700806	A	19870905	FI 1987-806	19870225
FI 84421	B	19910830		
FI 84421	C	19911210		
CA 1324951	A1	19931207	CA 1987-530939	19870302
AT 56584	E	19901015	AT 1987-301835	19870303
AU 8769667	A1	19870910	AU 1987-69667	19870304
AU 597626	B2	19900607		
JP 62252708	A2	19871104	JP 1987-47910	19870304
JP 06043285	B4	19940608		
US 4980176	A	19901225	US 1987-34609	19870406
PRIORITY APPLN. INFO.:			US 1986-836130	19860304
			EP 1987-301835	19870303

AB Compns. which provide synergistic microbial growth inhibition and biocidal activity, comprise (1) **isothiazolones** (I; R = lower alkyl; X = H, halo) and (2) hydroxymethylaminoacetic acid (II), its salts, or lower alkyl esters. **Antimicrobial** activity of Kathon CG [contg. I (R = Me, X = Cl) 1.15% and I (R = Me, X = H) 0.35%] in **combination** with II (trade name Suttocide A) was tested against gram-neg. bacteria. Obsd. MICs for the **combination** was less than the expected MICs based upon the results for each **antimicrobial** individually tested at half concns.
IT Bactericides, **Disinfectants**, and Antiseptics
(synergistic, hydroxymethylaminoacetate and isothiazolones in)

L8 ANSWER 27 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1982:202120 CAPLUS

DOCUMENT NUMBER: 96:202120
TITLE: **Biocide** testing against corrosion-causing oil-field bacteria helps control plugging
AUTHOR(S): Ruseska, I.; Robbins, J.; Costerton, J. W.; Lashen, E. S.
CORPORATE SOURCE: Microbios Ltd., Galgary, AB, Can.
SOURCE: Oil Gas J. (1982), 80(10), 253-4, 256, 261-2, 264
CODEN: OIGJAV; ISSN: 0030-1388
DOCUMENT TYPE: Journal
LANGUAGE: English

TI **Biocide** testing against corrosion-causing oil-field bacteria helps control plugging

AB Sessile bacteria cause plugging, corrosion, and souring in secondary and tertiary oil recovery operations; and the comparative efficacy of **biocides** against sessile populations of oil field water was detd. in carefully controlled test conditions. An app. was used that consists of a 1-in. pipe contg. a series of removable sterile metal studs exposed to water flowing through the system. The bacterial population on the studs was detd. under varying conditions of time and **biocide** dosage. Five different **biocides** were evaluated singly and in various **combinations**. **Isothiazolone** was the only **biocide** tested whose efficacy against sessile bacteria approached its efficacy against planktonic organisms.

ST **biocide** petroleum enhanced recovery; water petroleum reservoir bactericide; isothiazolone **biocide** oil field water

IT Bactericides, **Disinfectants**, and Antiseptics
(in petroleum enhanced recovery, for preventing corrosion and plugging, testing of)

IT Petroleum reservoirs
(water from, **biocides** for control of bacteria in, during oil recovery operations)

IT Quaternary ammonium compounds, biological studies
RL: BIOL (Biological study)
(alkylbenzyldimethyl, chlorides, **biocides**, in petroleum enhanced recovery)

IT Petroleum recovery
(enhanced, **biocides** for prevention of corrosion and plugging in, testing of)

IT 107-10-8D, alkoxy derivs. 111-29-5 2682-20-4 26172-55-4 63619-09-0
RL: USES (Uses)
(**biocides**, in petroleum enhanced recovery for preventing corrosion and plugging)

L8 ANSWER 28 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1980:562713 CAPLUS
DOCUMENT NUMBER: 93:162713
TITLE: 2-Bromo-2-nitro-1,3-propanediol in **combination** with acetic acid or **isothiazolone** derivatives as fungicide and algicide
PATENT ASSIGNEE(S): Green Cross Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 55073603	A2	19800603	JP 1978-147152	19781130
JP 58004682	B4	19830127		

TI 2-Bromo-2-nitro-1,3-propanediol in **combination** with acetic acid or **isothiazolone** derivatives as fungicide and algicide

AB 2-Bromo-2-nitro-1,3-propanediol (I) [52-51-7] in **combination** with either YO2CCH2X (X = halogen, Y = BrCH2CO2CH2CH:CHCH2, PhCH2, BrCH2CO2CH2CH2, or HOCH2CH2CH2) or II (Y = H, alkyl, etc.; R and R1 = H, halogen, or alkyl; M = alkali metal; heavy metal, etc.; Z = anion ; a = 1 or 2) are synergistic **antimicrobial** and antialgae agents. For example, the min. inhibitory concn. of I alone in the culture medium of Staphylococcus aureus was 12 ppm, but that of I in **combination** with 1,4-bis(bromoacetoxy)-2-butene [20679-58-7] was only 1 ppm. The min. inhibitory concn. of a mixt. of I with **isothiazolone** derivs. against Casmarium or Oscillatoria was <1 ppm.

IT Algicides
Fungicides and Fungistats
(bromonitropropanediol in **combination** with **isothiazolone** derivs.)

L8 ANSWER 29 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1975:558540 CAPLUS
DOCUMENT NUMBER: 83:158540
TITLE: Bactericidal composition
INVENTOR(S): Law, Andrew B.
PATENT ASSIGNEE(S): Rohm and Haas Co., USA
SOURCE: Ger. Offen., 27 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2459446	A1	19750626	DE 1974-2459446	19741216
DE 2459446	C3	19790405		
GB 1488892	A	19771012	GB 1974-21785	19741024
GB 1488891	A	19771012	GB 1974-46007	19741024
CA 1036070	A1	19780808	CA 1974-212881	19741101
IT 1024896	A	19780720	IT 1974-70421	19741122
JP 50095429	A2	19750729	JP 1974-137676	19741129
SE 7415860	A	19750623	SE 1974-15860	19741217
SE 430119	B	19831024		
SE 430119	C	19840202		
FR 2255083	A1	19750718	FR 1974-41525	19741217
FR 2255083	B1	19790601		
DK 7406685	A	19750825	DK 1974-6685	19741219
SE 7710162	A	19770909	SE 1977-10162	19770909
SE 430373	B	19831114		
SE 430373	C	19840223		
DK 7800918	A	19780228	DK 1978-918	19780228

PRIORITY APPLN. INFO.: US 1973-426881 19731220
GB 1974-46007 19741024
DK 1974-6685 19741219

AB **Combinations** of certain quaternary ammonium compds. with 3-isothioazolones of the general formula I (where R = R1 = H, halogen, or C1-C4 alkyl and R2 = C1-C18 alkyl, C2-C18 alkenyl, C3-C12 cycloalkyl, or a suitable aralkyl or aryl residue) showed synergistic bactericidal activities. The quaternary ammonium compd. was typically an alkyldimethylbenzylammonium halide, and CaCl2 salt complexes of the **isothiazolones** were also used.

IT Bactericides, **Disinfectants** and Antiseptics
(isothiazolone-quaternary ammonium compd. mixts. as)

L8 ANSWER 30 OF 30 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1975:565877 CAPLUS
DOCUMENT NUMBER: 83:165877

TITLE: Preservation of water-thinned paints in metallic containers

AUTHOR(S): Carter, G.; Huddart, G.
CORPORATE SOURCE: Org. Div., Imp. Chem. Ind. Ltd., Blackley/Manchester, Engl.

SOURCE: Double Liaison - Chim. Peint. (1974), 21(225), 219-26
CODEN: DLCPDY
DOCUMENT TYPE: Journal
LANGUAGE: French

AB The best microbiol. preservative for H2O-thinned paints in metal cans, based on paint preservation, stability, **odor**, and environmental acceptability, is a **combination** of biocidal 3-benzisothiazolone [2634-33-5] deriv., such as Proxel CRL [54392-15-3], with a compatible fungicide, such as ZnO [1314-13-2], tributyltin oxide [56-35-9], 2-thiazol-4-ylbenzimidazole [148-79-8], or 2-octyl-3-**isothiazolone** [26530-20-1].

ST preservative latex paint; **biocide** latex paint; fungicide latex paint; benzisothiazolone **biocide** paint; zinc oxide fungicide paint; tin deriv fungicide paint; isothiazolone octyl fungicide; thiazolylbenzimidazole fungicide paint

IT Fungicides and Fungistats
(preservatives, contg. **biocides**, for latex paints in metal cans)

IT 56-35-9 148-79-8 1314-13-2, uses and miscellaneous 26530-20-1
RL: USES (Uses)
(preservatives, contg. **biocides**, for latex paints in metal cans)